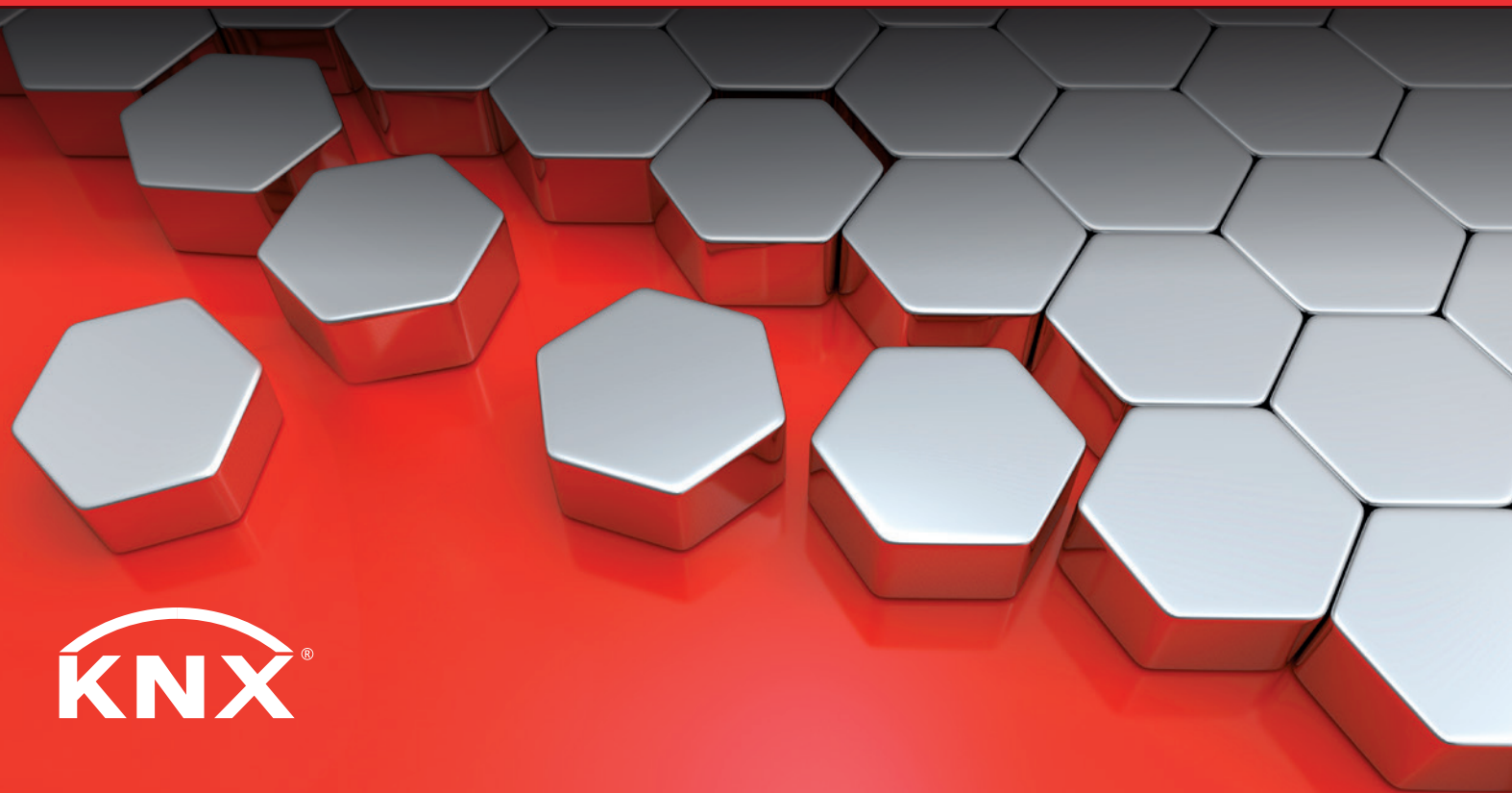




Feel comfortable in your building



# Your KNX project with B.E.G.



# Efficient, comfortable, safe and flexible buildings

## B.E.G. DX sensors, quality for your KNX project

The energy transition is currently at the centre of attention. The building sector is one of the most energy-intensive sectors and offers considerable potential for savings. Savings can be achieved not only through one-off construction measures such as insulation or replacing heating and lights. Rather, an intelligent interlinking of technologies reduces energy consumption in the

long term, so reducing costs and emissions in building operations. Integrated systems are already specified for energy-intensive buildings and even stricter requirements are in preparation so that the European Union can achieve its declared goal of climate neutrality.





## Automating buildings with KNX

Today, KNX is becoming more widespread and well-known solution for building automation. Over 500 manufacturers produce more than 8,000 KNX product families for more than 100,000 applications. The KNX bus system opens up almost unlimited possibilities and is future-orientated as it is constantly being further developed.

B.E.G. Brück Electronic GmbH offers numerous KNX system components such as sensors, system devices and switching actuators, dimming and control actuators, room control units, a B.E.G. ViSTATION for easy visualisation and manual operation of individual KNX projects as well as BIM data for planning. B.E.G. is internationally recognised above all for its wide range of solutions with high-quality PIR sensors for numerous applications and a wide variety of requirements.

## Multifunctional Deluxe sensors for KNXs

Terms such as „motion and presence detectors“ will soon seem outdated. These multifunctional sensors not only detect changes in the infrared thermal image (presence) and the presence of light. The new generation of sensors can do much more. In those models where it makes sense from an application point of view, sensors react to a wide range of physical or chemical variables such as air quality, temperature, humidity and acoustics. They process these and send control signals to other devices and actuators. B.E.G. sensors thus form the basis of building automation. In the KNX segment, B.E.G. sensors are characterised as the key to efficient energy use and at the same time ensure comfort and safety for building users.



# KNX system and control devices

## The helpers that make your KNX system successfully up and running

In addition to our high-quality detectors and sensors, we manufacture KNX system devices such as DIN rail mounted devices, flush-mounted devices and wall-mounted devices. They get the automated building up and running successfully.

Every KNX system requires various system devices to create the basic topology. These can be:

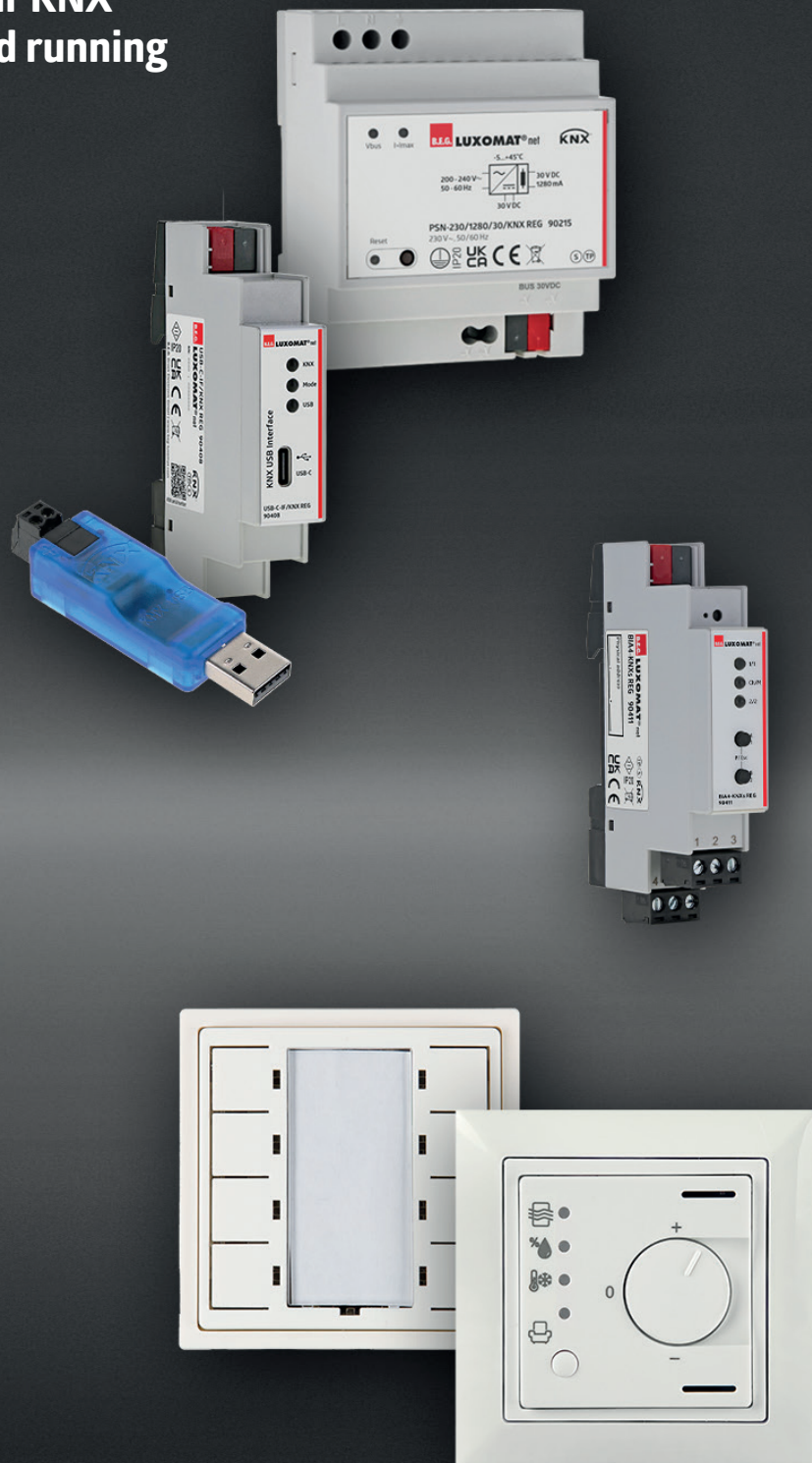
- Power supply
- Line coupler
- USB- or IP interface
- IP router

External control signals can also be processed. These devices bring the binary signals into the KNX:

- Binary input modules
- Push-button coupler, 4-way

Wall-mounted devices enable convenient operation and control of the systems:

- Wall switch with 2, 4, 6 or 8 buttons
- Wall sensor for temperature, humidity and VOC control



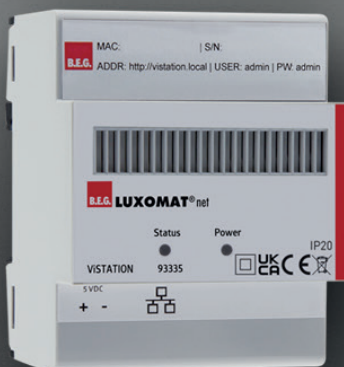


Actuators in a wide variety of designs bring the control requirements into the system:

- Switch actuators, 4-gang or 12-gang
- Blind actuators, 4-way
- DALI gateway with a DALI line and integration of DALI-LINK sensors

Professional visualisation enables individual operation and the output of all available values and system states, whether on a PC, tablet or smartphone. Visualisations for small and large KNX systems can be created quickly and easily, without time-consuming project planning.

- ViSTATION for up to 1600 devices
- ViSTATION Windows Server for even more devices



We are constantly expanding our programme to cover the wide range of requirements in building automation:

- System devices and switching actuators
- Dimming and control actuators
- Room operating units
- KNX RF devices





## Temperature sensor in B.E.G. KNXs-DX

Additional temperature sensors are integrated in DX models ideal for applications with integrated demand. The temperature sensors can be used to regulate the room temperature: Heating, air conditioning, ventilation and shading are then automatic. This is highly convenient.



## Lighting control with B.E.G. KNXs-DX sensors

B.E.G. motion detectors control lighting wherever and whenever it is needed. They thus ensure safety and energy savings. Presence detectors permanently measure the existing illuminance and dim the lighting to a preset value, e.g. in accordance with the DIN EN 12464-1:2021-11 standard applicable to workplaces, thus protecting luminaires and saving even more energy. Dimming can also draw the attention of the audience and create an atmosphere at events and meetings. HCL and RGB round off the outstanding illumination of the rooms.





## Buildings for well-being and a better future

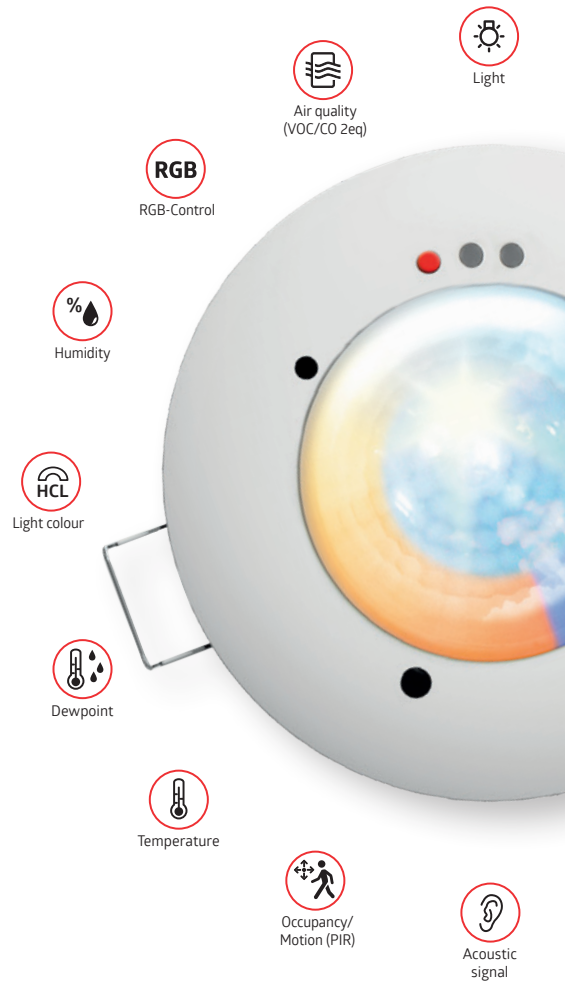
Buildings have always offered protection from wind, weather and external forces. They convey safety and security. Today new working structures, rapid digitalisation and the challenges of the climate crisis are changing our way of life. People in industrialised countries spend up to 90 % of their time indoors every day. Building automation helps to integrate the positive effects of lighting, fresh air and pleasant temperatures into the building.

Where the user no longer has to intervene, the building automation system ensures the desired energy balance: for example, there is no heat loss from not closing the shutters overnight (savings of up to 30 %) and no unnecessary energy wastage from lighting when there is already sufficient daylight or rooms are not being used (savings of up to 80 % depending on the application).



## Excellent air quality with the PD2N-KNXs-OCCULOG-DX

The PD2N-KNXs-OCCULOG-DX is a feel-good multi-sensor with numerous functions. In addition to temperature and humidity, the measurement of VOCs (Volatile Organic Compounds) and the output of CO<sub>2</sub> equivalents are of particular interest. Higher concentrations of VOCs can lead to indoor pollution and discomfort (sick building syndrome). These volatile, organic components in indoor air include, for example, evaporating paints, varnishes, solvents, adhesives and cleaning agents, as well as alcohols (deodorant, perfume) and sulphur-containing compounds (onions, garlic). Carbon dioxide (CO<sub>2</sub>) is an end product of breathing. It itself does not cause any health problems, but it does indicate a decreasing oxygen content in the room air. If you consider the up to 20,000 litres of air that an adult breathes in and out every day, you can imagine how quickly the oxygen content in an occupied conference room or open-plan office can drop. The PD2N-KNXs-OCCULOG-DX triggers the supply of fresh air.



## KNX Multisensor-DX



- 93530 PD2N-KNXs-OCCULOG-DX-FC
- 93531 PD2N-KNXs-OCCULOG-DX-FM



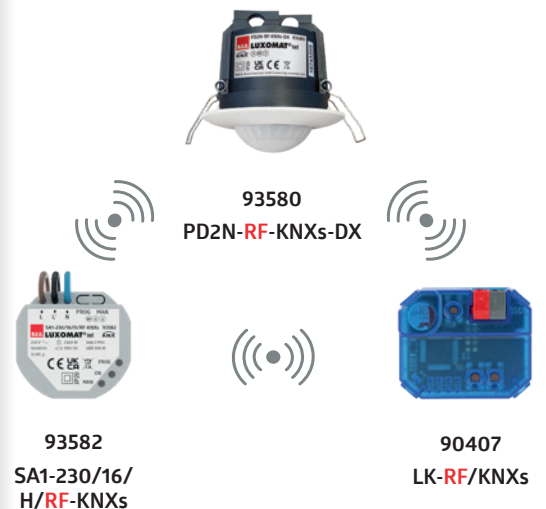
## KNX convenience now without BUS cable

KNX enthusiasts have been waiting for it, the first high-quality sensor and the first KNX sensor with radio transmission and relay included. With the B.E.G. PD2N-RF-KNXs-DX-FC, lighting, heating, ventilation, air conditioning and extensive comfort settings can be precisely controlled. Without any physical BUS cable, but via the KNX-RF standard, additionally extra secure via KNX Secure, the presence detector also conquers existing properties. The usual “3 wires” are sufficient for the power supply and lighting control.

The fast and secure KNX transmission of the recorded signals takes place via the 868.3 MHz centre frequency. And if an additional relay channel is required, e.g. to activate additional switchable lights via the presence of people, the new integrated relay channel can be used.

The new KNX RF flush-mounted switching actuator SA1-230/16/H/RF-KNXs can be used to trigger additional switching actions by radio. KNX RF is a bidirectional radio system in which the devices within an RF line communicate with each other independently. With a B.E.G. TP/RF media coupler LK-RF/KNXs, the radio version (KNX RF; Radio Frequency) is connected to the classic version via KNX BUS lines (KNX TP; Twisted Pair).

As with the TP devices, the new RF devices are commissioned using the ETS. The new RF version includes all the functionalities of the PD2N-KNXs-DX-FC, a deluxe version (DX) of the latest KNX generation and a successful model from B.E.G. Brück Electronic GmbH. The B.E.G. PD2N-RF-KNXs-DX-FC underpins the future viability of the successful KNX bus system, boosts the business of planners, KNX integrators and installers and raises convenience and energy efficiency to a new level.





1000

3000

3200

3500

4500

5500

6000

7000

10000



## Human Centric Lighting (HCL) in B.E.G. KNXs-DX

Building automation enables a high level of convenience. The Deluxe sensors are therefore equipped with HCL, among other features. HCL focuses on the well-being of building users by simulating the natural course of daylight and activating the release of hormones to stabilise the user's circadian cycle. Light colour and lighting intensity support relaxation, prevent phases of fatigue and increase concentration. Building users thus benefit from the advantages of biodynamic light. The Deluxe sensors offer light curves that have been developed for a wide range of applications.

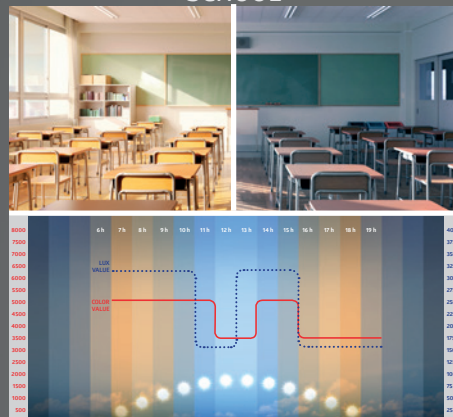


## RGB in B.E.G. KNXs-DX

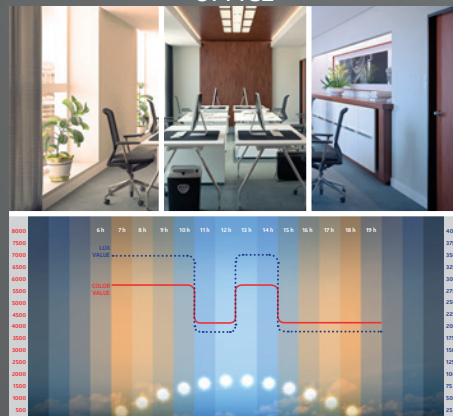
RGB is an additive colour model in which up to 16.7 million different colours can be generated from the three light colours red, green and blue. The B.E.G. KNX Deluxe sensors therefore enable atmospheric lighting at any time. It is also possible to implement lighting in colours that match the corporate design - e.g. the lighting of a foyer to create an external effect. When presence is detected, a quick change from coloured lighting to neutral lighting can be made.



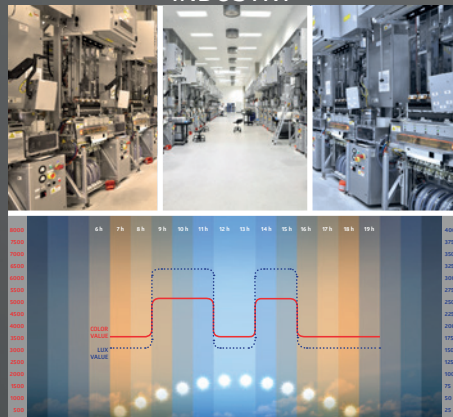
### SCHOOL



### OFFICE



### INDUSTRY





## Acoustic sensor in B.E.G. KNXs-DX

The acoustic sensor in DX models is used for additional noise detection - not only in winding stairwells, the acoustic sensor can also be used for additional presence detection in sanitary facilities. For example, additional presence detectors in individual toilet cubicles or in the shower area can be dispensed with.

## The plus in comfort





Heating, air conditioning, ventilation, shading, lighting and optimisation to the needs of the room users are all automatic. A higher level of comfort and safety with lower energy consumption can only be achieved through intelligent control and monitoring of all the products used.

Whether colour variants or technical details - the high-quality sensors from B.E.G. offer a wide range. Further device details can be found on the Internet and in the current B.E.G. KNX brochure or you can obtain advice from your electrical wholesaler.



## KNX Secure

For a long time, no thought was given to securing KNX-controlled buildings. Like any other communication technology, home and building automation can also be a target for hackers. All new KNX sensors with the identifier KNXs - the s stands for „Security“ - have been revised by B.E.G. to protect the building system technology and offer the possibility of secure building operation. First and foremost, it is particularly important that the security concept is applied when setting up KNX and that passwords are stored securely. KNX Secure itself then fulfils the highest encryption standards (in accordance with ISO 18033-3, for example AES 128 CCM encryption). KNX Data Secure effectively protects user data against manipulation through encryption and authentication. KNX IP Secure ensures complete encryption of transmitted telegrams and data.

DELUXE-SENSOR	DETECTION AREA	TYPICAL APPLICATIONS	NUMBER OF SENSORS				MORE
			 MOVEMENT	 LIGHT	 TEMPERATURE	 ACOUSTIC	
PD2N-KNXs-DX	Ø 10 m	All buildings, inside	1	2	1	1	-
PD2N-RF-KNXs-DX	Ø 10 m	All buildings, inside	1	2	1	1	-
PD2N-KNXs-OCCULOG-DX	Ø 10 m	Functional buildings, interior	1	2	1	1	2
RC-plus next N 230 KNXs-DX	20 m	Outdoor area	3	1	1	-	-
Indoor 180-KNXs-DX	10 m	All buildings, toilets, passageways, inside	1	1	1	1	-
PD11-KNXs-FLAT-DX	Ø 9 m	All buildings, interior, design	1	1	1	1	-
PD4N-KNXs-DX	Ø 24 m	Functional buildings, interior, large	4	2	1	1	-

\*Further sensors available for special applications, details at [www.beg-luxomat.com](http://www.beg-luxomat.com) or in the B.E.G. KNX brochure

## FUNCTION OVERVIEW SENSOR VARIANTS

Type	PD2			PD4			PD4-GH	PD9 (GH)	PD11			PICO		PD5N	Indoor 180		RC plus next-N
	BA	ST	DX	BA	ST	DX	DX	DX	ST	DX	ST	DX	DX	ST	DX	DX	
Number of light sensors	2	2	2	2	2	2	1	1	1	1	1	1	1	2	1	1	1
Number of motion sensors	1	1	1	4	4	4	3	1	1	1	1	1	1	2	1	1	3
Number of HVAC outputs	-	3	3	-	3	3	3	3	3	3	3	3	3	3	3	3	3
Sensitivity adjustment PIR	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Bidirectional remote control	-	X	X	-	X	X	X	X	X	X	X	X	X	X	X	X	X
End customer remote control	-	-	X	-	-	X	X	X	-	X	-	X	X	-	X	X	X
Temperature sensor	-	-	X	-	-	X	X	X	-	X	-	X	-	-	X	X	X
Sound sensor	-	-	X	-	-	X	-	-	-	X	-	-	-	-	X	-	-
Logic module	-	-	X	-	-	X	X	X	-	X	-	X	X	-	X	X	X
Presence simulation	-	-	X	-	-	X	X	X	-	X	-	X	X	-	X	X	X
Internal push-buttons	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Internal orientation light	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Slave output	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Slave input	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Switching operation	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Regular operation	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Semi-automatic mode/ fully automatic mode	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Light scenes	-	X	X	-	X	X	X	X	X	X	X	X	X	X	X	X	X
Offset mode	-	X	X	-	X	X	X	X	X	X	X	X	X	X	X	X	X
Orientation light function	-	X	X	-	X	X	X	X	X	X	X	X	X	X	X	X	X
Burn-in function	-	X	X	-	X	X	X	X	X	X	X	X	X	X	X	X	X
Parameter changes via object	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Self-adjustment of run-on time	-	X	X	-	X	X	X	X	X	X	X	X	X	X	X	X	X
Short presence	-	X	X	-	X	X	X	X	X	X	X	X	X	X	X	X	X
Direction recognition	-	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	X
Daylight-dependent switch-off	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
HCL/ RGB control	-	-	X	-	-	X	X	X	-	X	-	X	X	-	X	X	X
KNX Secure	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X



For further info

**BA = Basic** – Economic solution for simple requirements

**ST = Standard** – comprehensive solution for common requirements

**DX = Deluxe** – premium solution for demanding applications

**BASIC**

**STANDARD**



**PD2N-KNXs-BA-FC**  
Occupancy detector  
Ceiling mounting  
93533



**PD2N-KNXs-ST**  
Occupancy detector  
Flush mounting  
93511



**PD2N-KNXs-BA-UP**  
Occupancy detector  
Flush mounting  
93534



**PD2N-KNXs-ST**  
Occupancy detector  
Ceiling mounting  
93510



**PD4N-KNXs-BA-FC**  
Occupancy detector  
Ceiling mounting  
93535



**PD4N-KNXs-ST**  
Occupancy detector  
Flush mounting  
93515



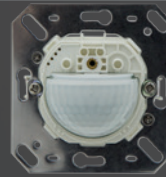
**PD4N-KNXs-BA-UP**  
Occupancy detector  
Flush mounting  
93536



**PD4N-KNXs-ST**  
Occupancy detector  
Ceiling mounting  
93514



**PD11-KNXs-FLAT-ST**  
Occupancy detector  
Ceiling mounting  
93522



**Indoor 180-KNXs-ST**  
Occupancy detector  
Wall mounting  
93524



**PICO-KNXs-ST**  
Occupancy detector  
Ceiling mounting  
93539

DELUXE



**PD2N-KNXs-OCCULOG-DX**  
Occupancy detector  
Flush mounting  
93531



**PD2N-KNXs-OCCULOG-DX**  
Occupancy detector  
Ceiling mounting  
93530



**PD2N-KNXs-DX**  
Occupancy detector  
Flush mounting  
93513



**PD2N-KNXs-DX**  
Occupancy detector  
Ceiling mounting  
93512



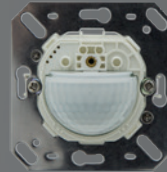
**PD4N-KNXs-DX**  
Occupancy detector  
Flush mounting  
93517



**PD4N-KNXs-DX**  
Occupancy detector  
Ceiling mounting  
93516



**PD11-KNXs-FLAT-DX**  
Occupancy detector  
Ceiling mounting  
93523



**Indoor 180-KNXs-DX**  
Occupancy detector  
Wall mounting  
93525



**PD9-KNXs-DX**  
Occupancy detector  
Ceiling mounting  
93520



**PD9-KNXs-GH-DX**  
Occupancy detector  
Ceiling mounting  
93521



**PD4-KNXs-GH-DX**  
Occupancy detector  
Ceiling mounting  
93518



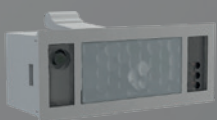
**PICO-KNXs-DX**  
Occupancy detector  
Ceiling mounting  
93529



**RC-plus next N 230  
KNXs-DX**  
Occupancy detector outdoor  
Wall mounting  
93528



**RC-plus next N 230  
KNXs-DX**  
Occupancy detector outdoor  
Wall mounting  
93527



**PD5N-LAMELLA-  
KNXs-DX WB**  
Installation in slatted ceilings  
Ceiling mounting  
93508



**PD5N-LAMELLA-  
KNXs-DX BB**  
Installation in slatted ceilings  
Ceiling mounting  
93509

**RADIO (RF)**

**WALL-MOUNTED DEVICES**



**SA1-230/16/H/RF-KNXs**  
1 Channel switching  
actuator radio  
Wall mounting  
93582



**PBM-KNX-DX-4W**  
4 Channel input-/output  
Push button interface  
93365



**RF-Funk Deluxe  
PD2N-RF KNXs-DX**  
Occupancy detector radio  
Ceiling mounting  
93580



**PB2-KNX-ST**  
2-multi-point  
Push button  
93172



**LK-RF/KNXs**  
RF/TP Media coupler  
Wall mounting  
90407



**PB4-KNX-ST**  
4-multi-point  
Push button  
93174



**PB6-KNX-ST**  
6-multi-point  
Push button  
93176



**PB8-KNX-ST**  
8-multi-point  
Push button  
93178

**USB DATA INTERFACE**



**USB-Stick-IF/KNX**  
USB data interface  
90409



**WS-VOC-HVAC-KNX**  
Temperature  
controller and VOC  
Controller/Multisensor  
93806

For further information



## DIN RAIL MOUNTED DEVICES



### ViSTATION

Visualisation and remote-server  
Visualisation  
93335



### LK-IP/KNXs REG

IP Router  
System device  
90403



### SA4-230/16/H/KNXs REG

4 switching outputs  
Switching actuator  
93224



### LAN-IF/KNXs REG

LAN programming interfaces  
System device  
90404



### SA8-230/16/H/KNXs REG

8 switching outputs  
Switching actuator  
93228



### DA64-230/KNX REG

1 DALI-line addressing mode  
DALI-Gateway  
93302



### SA12-230/16/H/ KNXs REG

12 switching outputs  
Switching actuator  
93328



### DA64-230/ KNX REG DALI-2

1 DALI-Line addressing mode  
DALI-Gateway  
93338 **COMING SOON 2025**



### SBA4-230/10/H/KNX REG

4 Channel switching output  
Blind actuators  
93930



### LK-TP/KNXs REG

TP Line coupler  
System device  
90410



### PSN-230/640/30/ KNX REG

Power supply  
System device  
90214



### BIA4-KNXs REG

4 input active  
Binary inputs  
90411

**COMING SOON 2025**



### PSN-230/1280/30/ KNX REG

Power supply  
System device  
90215



### BIP4-KNXs REG

4 input passive  
Binary inputs  
90412

**COMING SOON 2025**



### USB-C-IF/KNX REG

USB-C data interface  
System device  
90408

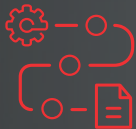
## Our project service for your plans and innovative buildings

B.E.G. offers a wide range of services, customised to your needs. Our team of experts offers you a comprehensive service. In addition to our competent sales field service, we also offer you our project service.



### 1. Recording the customer requirement

The project will be discussed with you in detail, no matter how much time we need together.



### 2. Creation of a system design

Based on the consultation, we create a system design for you in which we create a technically economical and ecological system design. Whether server solution, KNX or DALI-2. We offer you the right solution. This also includes validation in accordance with DWG sensor planning.



### 3. Sensor planning

Simply outsource the sensor planning in a project free of charge? Gladly, with us always. With our planning service, we offer you a solution created by our experts with years of experience.



### 4. Project support

We work with you to successfully complete the project. Our project service will be on hand with help and advice.



### 5. After-Sales-Service

Once the project has been successfully completed, we will continue to support you with our after-sales service.

**Are you interested? Then simply contact us: [projects@beg.de](mailto:projects@beg.de)**